

REACH



A publication of the U

ONE CUBE OR TWO? Scientist Susan Jones of Fluor Hanford's Plutonium Finishing Plant Plutonium Process Support Laboratories examines one of PFP's 1,600 polycubes that will be stabilized beginning early next year. The two-inch cubes of plutonium oxide were fabricated in a polystyrene matrix during the 1960s for use in criticality testing. PFP and PNNL staff members teamed up to do extensive evaluation and testing that confirmed the polycubes can be safely stabilized in PFP's existing muffle furnaces. This will save money by avoiding the installation of special pyrolysis equipment.



Baffling odor detected in 200 East

A "take-cover" alert was imposed in the 200 East Area for four hours the morning of May 17 while reports of a mysterious sulfur-like odor were investigated. The precautions were lifted at noon, after air samples collected by investigative teams of the Hanford Fire Department found nothing hazardous.

Five employees who had detected the odor were evaluated by the Hanford Environmental Health Foundation and were returned to their jobs with no work restrictions. Site industrial hygiene organizations continued to collect samples in the 200 East Area, but the source of the odor had not been determined at press time on Thursday.

There were no off-site impacts in connection with the incident, and no release of radiation. The take-cover action was initiated as a precautionary measure. Notifications were made to off-site emergency management organizations and other regulators in accordance with Hanford emergency notification procedures. ♦

Transuranic shipment waiting on audit approval

Depending on the approval of an audit report, the first shipment of transuranic waste could be leaving the Hanford Site and heading for New Mexico within the next month.

The shipment hinges on the New Mexico Environment Department signing off on the final audit report from the Department of Energy Carlsbad Area Office. The NMED received the report on capabilities at Hanford at the end of April.

Approval would trigger the first shipment that could include as many as 42 drums, said Mark French, manager of the Transuranic Waste Program for the DOE Richland Operations Office. French was speaking at a May 16 Federal Building public meeting put on by Hanford Communities.

The first drums to be shipped contain transuranic wastes from the Plutonium Finishing Plant. These wastes include tools and other items that have been contaminated with transuranic radionuclides, which have a higher atomic weight than uranium and take longer to decay than low-level wastes.

The wastes are being trucked to the Waste Isolation Pilot Plant, located about 35 miles northeast of Carlsbad, N.M. There, the wastes will be permanently stored a half-mile under the desert in a repository hewn out of solid salt. Eventually the repository will hold 1.2 million cubic feet of barreled wastes from 10 DOE sites.

"People associated with the project are very excited about getting the first shipment on its way," French said, noting that barrels from sites such as Hanford will be collected at WIPP over a 30- to 35-year period.

About 2,500 truckloads will be shipped from Hanford during that period, which equates to 80,000 barrels leaving the site. In the beginning, about one truckload a month will be shipped from Hanford.

The Waste Management Project is managed by Fluor Hanford. ♦



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See the *Hanford Reach* on the Web at:
www.Hanford.gov/reach/index.html

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DOE starts fund for Los Alamos fire victims

Secretary of Energy Bill Richardson announced last week the establishment of a disaster relief fund intended to help fire victims who are federal and contractor employees of the Department of Energy's Los Alamos Area Office and the Los Alamos National Laboratory. The DOE Northern New Mexico Fire Recovery Fund began accepting donations immediately.

Richardson established the fund after visiting Los Alamos on May 11. "The Department of Energy has an obligation to help our federal and contractor employees as well as the communities suffering because of the fire," he said in his May 14 announcement. "While there are relief agencies providing on-the-spot assistance, we know this will be a long and difficult recovery process for our employees and the surrounding communities."

The Northern New Mexico Fire Recovery Fund will be managed by the DOE chief financial officer, and applications for assistance will be reviewed by a designated executive board.

The fund is authorized to accept gifts from all public and private sources, and donations are tax-deductible. Make checks payable to the Department of Energy, indicating they are for the Fire Recovery Fund, and mail them to:

U.S. Department of Energy
Attn: Northern New Mexico
Fire Recovery Fund
P.O. Box 500
Germantown, MD 20874-0500

The Los Alamos Area Office suffered smoke damage from the fire and will temporarily relocate to the LANL administration building. The area office has 65 federal and contractor employees, while LANL contractors have about 8,000 total workers.

Richardson praised the LANL prime contractor, the University of California, for donating \$150,000 to the relief effort and offering low-interest loans, extended leave with pay and counseling services.

"Everyone associated with the Department of Energy has been saddened by the fire's destruction and recognizes that the road to recovery will be a long one," Richardson said. "The community has my assurances that the Department of Energy will do everything in its power to help our employees, our contractors and the impacted communities." ♦



Williams

Williams succumbs to cancer

Gloria Jean Williams, 44, a longtime employee who worked most recently for Lockheed Martin Hanford Company, passed away on May 10 after a long illness. She is survived by husband, John S. Williams, who works for DynCorp Tri-Cities Services and their children John III, Kintisha, NaShuntae and Kayla.

Williams was a longtime resident of the Tri-Cities and an employee at Hanford for more than 20 years. She continually worked to promote and support programs for young people in her community.

Even after being diagnosed with a serious illness, Williams continued to be a devoted, dedicated parent, attending many choral and academic programs at Pasco High School for all of her daughters. Her biggest dream was for all of her "girls" to attend college, and she worked hard to fulfill that dream. Williams was also an active member of the Trinity Church of God In Christ, where she served as a youth coordinator. ♦

PNNL technology: from ancient jewelry to cosmic rays

PNNL science offers clues to artifact's origin

What happens to 3,000-year-old bronze that has been buried for centuries? Knowledge of the surface chemistry of ancient objects may provide clues to their history, and could influence approaches to preservation.

The first high-resolution images of an ornamental fragment that likely originated in what is now eastern Turkey show the surface has segregated into tin and copper regions. Surface corrosion was minimized because the tin scavenges oxygen to form a tin oxide that prevents it from corroding the copper. Those are the findings of an analysis performed with the help of an auger electron spectrometer at the Environmental Molecular Sciences Laboratory.

Italian and British researchers worked with Pacific Northwest National Laboratory scientists at EMSL in using the extremely sensitive instrument to view and understand the artifact's surface composition. High-resolution mapping of corrosion products is a first step toward understanding conditions under which interior corrosion occurs.

EMSL is a Department of Energy user facility providing world-class scientific equipment and expertise to the external scientific community.

New detectors track exposure to cosmic rays

In May, the European Union will put into effect first-ever occupational

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safety standards to track and limit airline crew members' exposure to cosmic rays — radiation found outside the earth's atmosphere and encountered on many commercial flights. Coincidentally, this landmark directive occurs as the current solar cycle reaches peak activity, resulting in solar storms and other increased radiation zones.

As interest in cosmic radiation heats up, researchers at PNNL are prepared to shed light on the issue with a detector designed to characterize the types and amounts of cosmic radiation encountered during commercial flight. Called a tissue-equivalent proportional counter, the detector simulates a human cell nucleus, records the energy deposited and measures the resulting tissue damage as cosmic radiation passes through the body's cells.

Now, Far West Technologies, Inc. of Richland is customizing the detector in response to interest from several European regulatory agencies, including those in Spain and England.

Similar detectors were developed in support of U.S. space travel and now are standard equipment on U.S. space shuttles.

Practice makes perfect for border officials

A group of Moldovan border enforcement officials will return home with more than American souvenirs after a May training program at PNNL. They'll also take home ideas and tools needed to fight the spread of weapons of mass destruction.

Through a program sponsored by the Department of Defense and the U.S. Customs Service, PNNL scientists teach border enforcement officials tricks of the smuggling trade, such as where weapons components can be hidden in vehicles. They also train border officials to use two technologies developed at PNNL that can help identify smuggled items.

Increased border security in countries such as landlocked Moldova has become more important since the break-up of the former Soviet Union. Since 1997, PNNL has trained about 175 border enforcement officials from 12 Eastern European and former Soviet countries. ♦

THE BIG APEL: Community leaders and other supporters of the Applied Process Engineering Laboratory, or APEL, participated in the facility's second anniversary celebration May 9. Above, from left, Joe Wiley and Don Moody of DOE's Office of the Assistant Manager for Science and Technology visit with Ruth Ann Kirk, director of Associated Western Universities. Pacific Northwest National Laboratory Director Lura Powell (at right) talks with other attendees.



Manipulators for K Basins spent fuel demonstrated

Michele Gerber, FH

The manipulators that will be used to remove spent nuclear fuel from the K Basins, then sort it and re-pack it into baskets for drying and storage, were demonstrated for the public May 9 at the APEL (Applied Process Engineering Laboratory) facility in Richland. Training on the manipulators is going forward in the APEL so that the Spent Nuclear Fuel Project will be ready to meet its aggressive schedule for fuel removal.

Nuclear chemical operator Tim Van Reenen, the working lead for manipulator operators, demonstrated fuel-loading procedures from a computerized control room located several feet away and out of sight of the unique manipulators. Operators will load each basket with about 50 fuel elements and scrap pieces by using the remotely operated "Konan" manipulator arms.

Precise handling

With the manipulators working above a fuel-sorting table, Van Reenen began by sorting the mock fuel assemblies (two thick-walled pipes, one inside the other), and separating the inner and outer portions of each one. He carefully picked up each assembly near its end and performed the inner and outer separation with a practiced eye and hand.

Fuel disassembly is necessary in order to make sure sufficient sludge and debris have been washed from it. The washing is a previous step in the fuel-retrieval process.

Once inspected, each fuel piece is picked up by the Konan arm and measured in a "go/no-go" gauge to determine whether it will fit in steel baskets fabricated to hold it during drying and storage. The elements that pass the gauge are then loaded into the new baskets using a "stinger" tool, an expandable device dangling from a flexible cable.

Dropping the stinger into the end of the upright fuel, Van Reenen demonstrated how it expands, lifting out the assembly's outer portion and placing it in a new basket. Then he lifted an inner element with the jaws and inserted it in the outer element in the basket.

While most of the baskets have been designed to hold intact fuel elements, some of the old K Basins fuel has broken off into scrap pieces. These fuel pieces ranging from 1 to 3 inches in size will be placed in the outer segments of specially designed copper baskets. Fuel pieces smaller than an inch are considered "fines," and will be placed in the innermost circle of the scrap baskets.



In a public demonstration at APEL, Tim Van Reenen, working lead for manipulator operators, demonstrates how a Konan robotic arm system will sort spent fuel in the K Basins.

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Skilled operators

The Konan manipulators, which can rotate in six different planes of operation, are capable of picking up scrap pieces as small as dimes. Konan arms mimic human arms in that they are capable of multiple movements — up, down, circular, pitch and yaw movements at shoulders, elbows, wrists and finger-like jaws. Each arm itself weighs about 350 pounds and is connected to a mast and bridge that together weigh about 1,250 pounds. The arm has a reach of about 6 feet and will work above a fuel sorting table in each of the two K Basins.

Ten cameras are trained on the Konan to help guide the operators during fuel loading. Good depth perception is needed, according to Van Reenen, but operators are free to view from whichever camera angles make them feel most comfortable. “We didn’t write a procedure for the camera views,” he said, adding that procedures do govern the loading sequence. “Our people become highly skilled at this work and undergo about 30 full days of training to be certified. They have to have the freedom to view the operation on the screen in the way that works best for them.”

Operators load five baskets of elements and scraps to go inside each Multi-Canister Overpack — a total of 200-250 fuel assemblies plus scraps.

Once fuel-loading operations are under way, operators will guide the Konan movements from their remote consoles for two hours, then rotate to other tasks for two hours. “It’s stressful,” Van Reenen explained, “because guiding the manipulators requires such precision and total concentration.”

Konan unique

Five complete sets of Konan arms have been built for the SNF Project. They were built by a team comprising Oceaneering International, Inc. (with a local office in Richland called Oceaneering Remote Intervention) and Schilling Robotics Systems, a subsidiary of GEC Alsthom, a French firm.

Two sets of Konan arms were installed in the K West Basin last summer and are now being thoroughly tested. Two more sets are being stored for installation in the K East Basin in 2001, and the fifth set has been used for training for the past two years. Konan uses proven manipulator and robotics technology that has been combined in a unique way for SNF Project needs.

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Manipulators for K Basins spent fuel demonstrated, cont.

All five Konan assemblies are identical and have interchangeable parts for ease of maintenance. Recently, when a Konan motor in the K West Basin developed problems, parts were replaced within hours by using portions of an identical spare, thus losing almost no time in the SNF Project testing schedule.

APEL anniversary

The Konan manipulator system demonstration was part of the second anniversary celebration held at the APEL facility. APEL is a 90,000-square-foot technology business incubation laboratory that is currently home to 10 businesses and 114 jobs.

APEL is a joint project of the Department of Energy, the Pacific Northwest National Laboratory, Energy Northwest, the Port of Benton, the Tri-City Industrial Development Council (TRIDEC), the City of Richland and Washington State University Tri-Cities. ♦

Savings Bond: long-term savings with built-in liquidity

Have you asked yourself, "Am I saving enough money?"

Financial writers are reporting that personal savings have begun to grow as many baby boomers start putting more money into savings while, at the same time, keeping a tighter rein on their spending.

Why? They are beginning to think about retirement.

Everyone should have financial goals, which can include a home, a new car, education for themselves or their children. The most important goal is to build security for the retirement years.

The only way to reach your goals is by saving regularly. The most important time to start is right now, and payroll plans for U.S. Savings Bonds offer an easy and automatic way of saving for future financial security.

It doesn't take large sums of money to begin. It's a matter of just setting aside a fixed amount each pay period. The amount will be automatically deducted and invested in a Savings Bond. Saving doesn't get much simpler than that.

Investors buying Series EE bonds now earn 90 percent of five-year Treasury yields right from the start. That translates into a 5.73-percent interest rate, which was announced May 1.

A new rate is announced each May and November, and that is the rate your bonds will earn for the next six months. The announced rate is compounded semiannually.

Interest is added each month. If a bond is cashed in before five years, there is a 3-month interest penalty. Once a bond is five years old, however, there is no penalty.

This preserves one of the best features of Savings Bonds — liquidity — while rewarding those who save for the longer term.

Want more information on Savings Bonds? Check out the **www.savingsbonds.gov** Web site. ♦

Guttenberg retiring after 30 years at Hanford

The staff at the Fast Flux Test Facility thought this day would never come, but Sol Guttenberg is retiring after 43 years in the nuclear business. Nearly 30 of these years were spent working at FFTF.

Guttenberg has worked on system design, construction overview, startup, operational support, shutdown, and more recently, restart initiatives. Before his FFTF experience, Guttenberg worked as a systems designer on pressurized-water reactors for naval propulsion and test facility design for nuclear rocket development.

Guttenberg has been manager of FFTF Engineering since 1995. According to co-workers, he is a unique individual and an intense manager with high expectations for top performance from his organization. His shrewd technical insight has been instrumental in the successful operation of FFTF. Guttenberg is also known to be quite a character, seldom taking a day off and working from home as well as office. Many of the FFTF staff members have received late-night and weekend calls from him. While the phone calls won't be missed, Guttenberg certainly will be, they say.

A dinner and "roast" to celebrate Guttenberg's retirement will take place June 16 at the Red Lion Hotel in Richland, beginning with a social hour at 6 p.m. and buffet dinner at 7. The cost of the dinner is \$25. Contact Cheri McGee at 373-9710 no later than June 6 to make reservations for the dinner or to donate to a retirement gift. Dinners must be purchased no later than June 8. ♦



Guttenberg

In Search of ISMS: Passing Phase 1 Verification

Dear Colonel Safety:

I understand that the Department of Energy recently conducted an "ISMS Phase 1 Verification" of the Fluor Hanford team. Did we pass?

Also, can one infer that a "Phase 2" audit is just around the corner, or has the ISMS blessing been completed?

Auditory Nerve

Dear Nerve:

For those familiar with Hanford audits, the opportunity to host dozens of auditors poring over procedures and system documentation does not sound like fun. However, in this particular case, the review process resulted in some positive improvements to the implementation of the Integrated Environment, Safety and Health Management System. As the review process evolved, the audit team was able to identify a number of noteworthy practices and a few areas for improvement.

It's important to remember that ISMS implementation represents a process of continuous improvement. The DOE Phase 1 review is a validation of steps to involve employees in work planning and hazard identification. Phase 1 Verification ensured the Fluor Hanford team had a procedural basis capable of supporting ISMS tenets.

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**David
Nelsen, aka
Colonel
Safety**



In search of ISMS: Passing Phase 1 Verification, cont.

Based on the breadth of Fluor Hanford's work scope, the Phase 1 Verification covered a large field of procedures and work processes. DOE combined individual project-level reviews under one evaluation of all Fluor Hanford organizations. When the validation effort was complete, the green light was given to conduct the second part of the evaluation process.

The second portion of the DOE review is called "Phase 2 Verification," and will be directed toward implementing ISMS principles in day-to-day work activities. DOE plans to begin Phase 2 Verification in June.

Phase 2 Verification will involve personnel interviews and the observation of fieldwork activities. The focus of Phase 2 Verification efforts is on the five general categories described below.

Procedure usage — Every worker on site must recognize when a procedure requires "step-by-step" compliance and when one can enter or exit a procedure based on the needs of the job.

Pre-job walkdowns — Pre-job walkdowns are among the most important functions in developing high-quality work packages. They help define the workscope and identify potential hazards and requirements before the job starts.

Job hazard analysis — The central tenet of ISMS is to involve employees in the identification and control of potential workplace hazards. Monthly safety meetings, employee safety suggestions and concerns forms, and workstation ergonomic evaluations are tools to promote worker involvement. The automated job hazard analysis is another tool. Getting the work team together to complete an AJHA promotes a thorough hazard evaluation, helps improve the flow of work steps and generates much of the required work package documentation.

Pre-job reviews — The importance of conducting comprehensive pre-job reviews cannot be overstated. Ideally, everyone working on a job will meet before starting work in order to discuss the flow of job tasks and specific hazard controls identified in the work package. In all situations, it is the responsibility of the person in charge to complete pre-job briefings with every employee as they arrive on the job. Besides discussing the details of the job tasks, pre-job briefings provide an open forum for the team to discuss potential work hazards, radiation work permits, work hold points, confined-space issues, special hazard controls and waste-handling issues.

Feedback — Integrated Safety Management is based on a simple idea: establish usable work processes and continuously improve those processes based on employee feedback. One of the most important feedback tools we use is the post-job review. Highlighting noteworthy practices and identifying areas for improvement provide the foundation for continuous process improvement. Unfortunately, we often find schedule commitments and the press of other work activities pushing post-job reviews to the back burner. Meaningful post-job reviews are essential in the timely and safe completion of future work because they ensure worker involvement in the identification of value-added work practices.

Getting work completed in a timely and safe manner depends on people understanding the scope of each job task and performing work within estab-

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lished controls. ISMS is the recognition of value-added work practices and the institutionalization of processes that continuously improve effective communications. Getting the right people, resources and procedures together for every job is not a matter of luck. Our success in meeting site cleanup objectives depends on finding smarter ways of getting each job completed.

For additional information on the Phase 1 Verification, send an e-mail to ^WMP/ASP ISMS Core Team or send me, David P. Nelsen, a message at Colonel Safety, S6-71. ♦

New PCB path clears hurdle for waste treatment

After detailed and open discussions between the U.S. Environmental Protection Agency and the Department of Energy's Office of River Protection, the two agencies announced that regulated polychlorinated biphenyls, or PCBs, do exist in some Hanford tanks. However, the cost to safely regulate the PCBs will be minimal compared to initial estimates of \$1.5 billion for removing them from the high-level radioactive tank waste.

Chuck Clarke, regional administrator of the EPA's Region 10, wrote in a May 12 letter to ORP and the DOE Richland Operations Office: "Based on information provided by DOE, and our experience in resolving PCB issues with K-Basin sludges, I do not believe that tank waste PCB issues are a legitimate basis for funding delays or schedule delays...Finalizing this pathway and insuring that its implementation leads to success in treating tank wastes and Hanford cleanup will require the highest degree of commitment by both ORP and RL."

"The Office of River Protection self-identified regulatable levels of PCBs in Hanford's aging waste tanks," said Dick French, manager of the Office of River Protection. "I am pleased that our open approach set in motion the steps to safely manage the PCBs while we move forward with the nation's most urgent environmental cleanup project."

The EPA does not normally regulate PCBs generated before 1978 under the Toxic Substances Control Act. Due to limited data, however, the Office of River Protection, with oversight by EPA, is taking actions that improve the way it will monitor and track PCBs during retrieval and treatment of the tank waste.

In 1976, the U.S. Congress listed PCBs as regulated substances suspected of causing cancer. PCBs were used at Hanford in the 1940s through the 1980s. Low levels of PCBs in some tanks originated from laboratory waste, environmental-cleanup and waste-transfer activities, lubricants for machinery, paints, and seals for industrial purposes.

Over the next few weeks, EPA and ORP will finalize the specifics on how they will ensure that tank waste cleanup proceeds in a timely manner, and verify procedures that assure tank waste transfers and the future treatment facility remain within environmental regulations.

"The result of these actions will ensure safety and protection of our workers, the public and the environment," French said. "Eliminating potential schedule and funding delays is one more significant step forward to a long-term solution for Hanford's 53 million gallons of high-level radioactive tank waste." ♦

ERC team makes progress while keeping safety first

Progress and safety go hand-in-hand for Bechtel Hanford, Inc. and the other companies on BHI's Environmental Restoration Contractor team, as well as their subcontractors. The ERC's Remedial Action and Waste Disposal Project recently reached two milestones that illustrate that connection.

"We are leading the way in showing how an attitude of safety first does not hinder visible cleanup progress," said Mike Hughes, president of BHI. "I am extremely proud of our team's progress and our employees' personal commitment to safety."

On May 10, the ERC's Group 4 Remedial Action Team removed the 20,000th container of contaminated soil and debris from the 100H Area. This equates to 376,300 tons of contaminated material that have been removed from the river corridor near H Reactor since remediation work began there in March 1999.

"Our team is committed to progress and safety in cleaning up the river corridor," said Tom Kisenwether, task lead for the Group 4 Remedial Action Team. "We accomplished this in 294 work days by removing an average of 68 waste containers each day. And we did it with zero lost-time accidents."

According to Kisenwether, this was definitely a team effort. "We have worked with and will continue to work closely with a number of groups, including DOE, our regulators, our HAMTC employees, subcontractors, building trades, other ERC groups and other Hanford Site contractors," said Kisenwether. "No one person or company can take credit for the accomplishment."

Once filled with nearly 20 tons of debris, each container was hauled approximately 17 miles to the Environmental Restoration Disposal Facility to be emptied. The trucks that carried those containers safely logged a total of 680,000 miles in taking the containers to and from the ERDF.

Those miles helped the ERC Team reach another milestone. On Thursday, May 11, BHI drivers logged their 4 millionth mile of safe transport of these waste containers to and from the ERDF. That is the equivalent of making eight round trips to the moon without an accident since the ERDF opened in mid-1996.

"For our drivers, safety is definitely no accident," said Bart Auckland, BHI's day-shift HAMTC truck driver and member of the senior ERC Voluntary Protection Program Council. "Our drivers are committed to preventing anyone from getting hurt as a result of an accident involving one of our trucks."

Vern Dronen, manager of the ERC's Remedial Action and Waste Disposal Project, commends his team's efforts. "Our employees have shown their commitment to getting the job done safely," added Dronen. "These two milestones should be viewed as stepping stones to removing the next 20,000 containers of waste from along the river and reaching the five-millionth-safe-mile mark." ♦

Bechtel uses technology to protect young salmon

Bechtel Hanford, Inc. and its Environmental Restoration Contractor team are providing a safer environment for young salmon in the Hanford Reach of the Columbia River.

The ERC team is expanding its use of an innovative technology, In-Situ Redox Manipulation (ISRM), to treat toxic chromium in the groundwater beneath the Hanford Site before the chromium reaches the river and the spawning grounds of the Chinook salmon.

“We are building on our early success in the use of this technology developed by Pacific Northwest National Laboratory,” said Arlene Tortoso, project manager for the U.S. Department of Energy’s groundwater remediation program. “Ultimately, we want to eliminate any potential impact on young salmon from the chromium found in Hanford’s groundwater.”

The current work is focused about 800 feet from the Columbia River, west of two closed Hanford reactors — D and DR. The groundwater in this area contains levels of toxic chromium that exceed the state and federal standards set for drinking water and aquatic life.

The chromium was used to slow corrosion in Hanford’s reactors during operations. Water contaminated with chromium was released to the soil during Hanford’s production years and has migrated to the groundwater that seeps into the Columbia River.



Crews of the Bechtel Hanford-led Environmental Restoration Contractor team have drilled 16 new wells as the existing chromium barrier is expanded near the Columbia River.

Long-term barrier

ISRM uses a chemical “curtain” or treatment zone to transform the toxic chromium into a much more benign and less-mobile material. The barrier may be effective for as long as 30 years.

“Last fall we completed the installation of our first 150-foot barrier to treat and immobilize the chromium,” said Garrett Day, the ERC team’s task lead for the project. “We are now ready to extend that barrier to a length of nearly 489 feet. Ultimately, we plan to extend the barrier to a length of nearly 2,000 feet by the end of fiscal year 2002.”

A total of 16 new wells have been drilled, 14 of which will be used to inject the chemical agent sodium dithionite into the groundwater to create the barrier. The other two wells will be used to monitor the effectiveness of the barrier.

The use of the ISRM technology at Hanford may be further expanded in the future. Additional research by PNNL is showing promise in using ISRM to treat other groundwater contaminants such as carbon tetrachloride.

PNNL is also testing the effectiveness of ISRM in treating chlorinated solvents in groundwater at the Army’s Fort Lewis in Tacoma and the Moffitt Field Naval Air Station in Mountain View, Calif. ♦

Log-on security messages — join the beta test

An initiative to elevate security awareness among all Hanford employees is called the “Log-on Security Message Program.” It capitalizes on the daily Hanford Local Area Network log-on process by displaying colorful graphic images of different security messages or slogans.

To determine whether this program can become a useful part of the security awareness campaign, Protection Technology Hanford’s Security Education office needs to thoroughly evaluate this message-delivery method. And you can help by becoming a test participant.

If you’re interested in participating, install the log-on security message program from Software Distribution (under the Software Testing category, labeled “Security Log-on Message”).

Once it’s installed, you will receive a new security message at the start of each day. These messages appear during the computer log-on process in front of other screen information. After viewing the message, you can close it by clicking on the corner “x.”

Use the program for two weeks and then submit your evaluations and comments to ^Desktop Product Management. Security Education wants to know how well the program worked for you and whether the messages hit the mark and raised your security consciousness.

For more information, contact Chet Braswell of Protection Technology Hanford at 376-1820. ♦



More about Log-on Security Messages

Will the Log-on Security Message process delay my start-up? Yes, but the length of the delay depends on your computer. Studies show that 68 percent of Hanford Site computers will have a delay of only 10 to 15 seconds. The slowest 3 percent of site computers will experience an unacceptable delay of about a minute. As newer computers arrive on site, start-up times will improve. If you have an older computer with only 16 or fewer megabytes of random access memory, you should not participate in this beta test.

Have previous test results been positive or negative? The majority of comments have been in favor of this program. However, comments from those who had the software “pushed” to their systems without prior notification or explanation were not favorable to the program.

Are there other uses for this program? Yes, including warnings about viruses such as the “Love Bug.” The Log-on Security Message system could have provided alerts and updates as computers were turned on or rebooted.

Can I remove this beta test from my start-up routine? Yes. Simply go to Software Distribution/Software Testing/Security Log-on and uninstall it.

What’s next? Safeguards and Security personnel with PTH and the Department of Energy will evaluate your recommendations and decide whether the log-on program should be used for all computers connected to the HLAN. *

* The HLAN is not available to Pacific Northwest National Laboratory employees or systems. ♦

Lifesaving steps for stroke or heart attack victims

Recognizing the warning signs of stroke or heart attack and knowing what to do can help save someone's life. Familiarize yourself with the following warning signs.

Warning signs of a heart attack:

- Uncomfortable pressure, fullness, squeezing or pain in the center of the chest that lasts more than two minutes or goes away and comes back
- Pain that spreads to the neck or either shoulder or arm
- Chest pain accompanied by light-headedness, weakness or fainting
- Chest pain accompanied by sweating, nausea or shortness of breath.

Not all of these warning signs occur in every heart attack, and many victims deny that they are having a heart attack. However, delay can be deadly.



Warning signs of a stroke:

- Sudden weakness in the face, arm and leg on one side of the body
- Loss of speech, or having trouble talking or understanding speech
- Some loss of vision, usually in only one eye, or unequal pupil size
- Unexplained dizziness or loss of balance
- A sudden severe headache
- A loss of bladder and/or bowel control.

Lifesaving steps

Here are some lifesaving steps to take to help a heart attack or stroke victim:

- If a patient is unconscious, check that his or her airway is open and that the patient is breathing and has a pulse. Start rescue breathing if necessary or CPR (cardiopulmonary resuscitation) if you are trained in that technique.
- At the same time, have someone dial 9-1-1.

For a heart attack:

- Help the patient to the least painful position (usually half sitting on a bed or sofa and supported by a pillow with a cushion under the knees). Be calm and reassuring.
- Loosen any tight clothing (usually around the neck and waist) and don't allow the patient to move unnecessarily.
- If the victim is conscious and has nitroglycerin, use it, but pay close attention to the prescribed dosage and frequency, since it comes in different strengths.
- Do not give the patient anything to eat or drink.

Continued on page 16

For a stroke:

- If the patient is unconscious or half-conscious, place him or her with the paralyzed side down on a bed or cushioned surface.
- If the patient is conscious, have him or her lie down with the upper body and head slightly elevated. Calmly reassure the patient.
- If the patient has dentures, remove them.
- Using a piece of cloth wrapped around a finger, wipe away any food or mucus from inside the mouth. Do not give any liquids or food if the throat is paralyzed.
- If an eyelid won't blink or close, gently close it, place a soft bandage over it and lightly tape the bandages in place to prevent drying and possible vision loss.

If a phone is not available or you can safely get to a hospital faster than the wait for an ambulance or paramedics, drive the patient to the nearest 24-hour hospital emergency department. Contact the patient's own doctor as soon as the patient is admitted.

For more information regarding heart health, contact the Hanford Environmental Health Foundation's Health Education Services at 373-3729. ♦

Regular Features



LETTERS

Employees are invited to write letters of general interest on work-related topics. Anonymous letters will not be printed. We reserve the right to edit letters or not to accept letters for publication. Send your letters to the *Reach*, B3-30, or to *Hanford Reach on e-mail. Letters are limited to 300 words, and must include your name, company, work group and location. Opinions expressed are those of the author and not of DOE-RL, ORP or their contractors.

Thumbprint required ?

During this year's Savings Bond blitz, don't forget to remind employees they may have the opportunity to submit their thumbprint when they redeem the bonds. I found out earlier this spring when I cashed some bonds for tuition. I have used the same bank for years to cash my bonds for my kids' tuition, but this last time the teller asked me if I minded giving my thumbprint.

I'm sure my jaw dropped. I couldn't believe it — here I am stuck with these bonds or I have to give my thumbprint. I thought perhaps the Savings Bond program may have changed its rules, so I agreed to it. While submitting to her request, we visited about this request, and it turns out it was a *bank policy*.

If you feel strongly against giving your thumbprint, you may want to call ahead and find out what the bank policies are, or you may luck out like I did for a long time when it was not enforced.

Lois Hill
Fluor Hanford

Lights, camera, action?

I just returned from my mandatory "Diversity Stand-Down" Training. I nominate the Hanford-Site video portion as "The Worlds Funniest Video of a DOE Site Attempting to Appear Concerned and Committed." For you "untrained" *Hanford Reach* readers who don't want to ruin the suspense— read no further!

The script went something like this:

Act 1, Scene 1

(Set) An L-shaped table, skirted in red, with seven people sitting behind it. An unknown participant stands in a darkened background, so far out of focus the viewer can't determine if it is a person or a reflection.

(Cameraman) Place the camera far enough away so the

viewer will be unable to determine if a mouth is moving. Don't zoom in or out, pan or even jiggle the camera.

(Unknown actor) Speak from behind the scene. You'll captivate the viewers by having them try to figure out which one of the seven at the table is speaking. Use the term "diversity" an unlimited number of times, no matter what you say. Then announce the next speaker.

Act 1, Scene 2

(Unknown actor) Enter, sit in the first chair, surprise the viewers because they thought it was one of seven at the table or the background shadow speaking.

(Second actor) Leave the set. Speak from behind the scene. Use the term "diversity" as many times as possible.

Act 2, Scene 1

(Unknown actor) Ask each of the seven people a question like, "What does diversity mean to you?" Or, "How could you make the world a better place if you were 'Diversity King/Queen for a Day'?" Keep the viewers guessing who is at the table by using only first names, like Sandy or Steve, and don't be consistent.

Final act

Just black out the viewing screen.

The end.

Mary Anne Reilly
Fluor Hanford



SHOEMOBILE

Sound Safety Products

May 30 _____

300 Area

along fence east of Wisconsin
12 noon to 4 p.m.

May 31 _____

200 East Area

northeast gravel parking lot of 2101-M
7 a.m. to 12 noon

200 West Area

parking lot east of MO-281
1 p.m. to 4 p.m.



Regular Features

CALENDAR

Salmon Bake coming in June

The 13th annual Salmon Bake presented by the Tri-Cities Kiwanis Clubs and the Tri-County Public Fire Educators and co-sponsored by Fluor Federal Services will be held Saturday, June 17, at the Richland Red Lion from 5 to 8 p.m. Proceeds will go to the Fire Safety House and the fund for the purchase of law enforcement video cameras.

The winner of a raffle for a new car will be drawn at the salmon bake. The raffle is part of a fund-raiser sponsored by the Tri-Cities Kiwanis and Rotary Clubs, Fluor Hanford, DynCorp Tri-Cities Services, Protection Technology Hanford and others to raise money for video cameras for law enforcement agencies. Tickets for the salmon bake are \$20 and are available from Tri-County Fire Departments, Kiwanis Club members, The Book Place in Richland, Fred Meyer in Richland, the Richland Red Lion Hotel, or by calling Donna Leech at 372-1783.

Expert Panel to meet on Hanford groundwater/vadose zone issues

The Hanford Groundwater/Vadose Zone Integration Project Expert Panel meets May 24-26 in Richland to review the project's current work and the progress made since its January meeting. The project is responsible for integrating all of the Hanford activities that affect the soil, groundwater and the Columbia River. The panel is composed of eight nationally recognized technical experts.

The meetings will be held at the Bechtel Building, 3350 George Washington Way, Richland. The meetings are scheduled for 8 a.m.-noon and 12:45-3 p.m. on Wednesday, May 24, and 8 a.m.-12:15 p.m. and 1 p.m.-3 p.m. on Thursday, May 25. The Expert Panel will present closing remarks from 1 p.m. to 3 p.m. on Friday, May 26.

Members of the public are welcome to attend the meetings. The panel welcomes public comment both Wednesday and Thursday beginning at 3 p.m. A building-access badge is required, but can easily be obtained with photo identification.

Information about the Expert Panel and the agenda for this meeting, along with information on the Integration Project, is available on the Internet at <http://www.bhi-erc.com/vadose>.

Learn about "The Power of Humor" and "Leadership for 2000"

Kadlec Medical Center and the National Management Association are sponsoring Dr. Tom Steiner, who will present "Leadership for 2000" and "The Power of Humor" on June 9 at the Richland Best Western Tower Inn. "Leadership for 2000" will take place 8 a.m.-1 p.m., and costs \$25. Topics include "Creating an Achievement Climate," "Option Thinking" and "Motivating Without Money." "The Power of Humor," a stand-up comedy presentation, will begin with a no-host social at 5:30 p.m. and dinner at 6. The cost of dinner and the presentation is \$25. Cost for both presentations is \$40. Contact Kadlec Medical Center Education at 942-2600 for more information.

Hot Hoops to benefit Sexual Assault Response Center

The seventh annual Hot Hoops 3-on-3 basketball tournament will be held June 10 and 11 in Richland. All proceeds from this fund-raiser will benefit both the education and crisis programs at the Sexual Assault Response Center. For information, call SARC at 946-2377. ♦

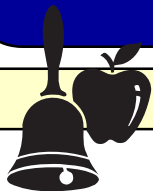


NEWSBRIEFS

Submit timecards early on Thursday, May 25

Memorial Day, observed on May 29, is a facility closure day and all Fluor Hanford team and CH2M HILL Hanford Group employees should have timecards for the week ending May 28 submitted and approved no later than 12 noon on Thursday, May 25. Estimate your time for the remainder of the workweek, including anticipated overtime for Saturday and Sunday. The Time Information System (TIS) will be unavailable for corrections until Wednesday, May 31. All corrections for the pay period ending May 28 will be reflected on a future paycheck. Adherence to the above schedule will enable payroll to process and distribute paychecks on Friday, June 2, as scheduled. Contact Todd Beyers at 376-2815 for more information and additional assistance. ♦

Regular Features



CLASSES

Columbia Basin College Small Business Development Center offers:

- **Small Business Planning Basics** – May 31, 6-9 p.m. Cost: \$15. Instructor: Blake Escudier. The class will be held at the TRIDEC Conference Room.
- **Small Business Advertising Basics** – June 3, 9 a.m.-12 p.m. Cost: \$15. Instructor: Blake Escudier. The class will be held at the TRIDEC Conference Room.
- **Making Money on the Side** – June 5, 6-9 p.m. Cost: \$15. Instructor: Blake Escudier. The class will be held at the Energy Northwest Multipurpose Facility.
- **Small Business Tax Accounting** – June 7, 6-10 p.m. Cost: \$35. Instructor: Don Smith, CPA. The class will be held at the Energy Northwest Multipurpose Facility.

The TRIDEC Conference Room is located at 901 N. Colorado, Kennewick. The Energy Northwest Multipurpose Facility is located at 3000 George Washington Way, Richland. To register or obtain more information, call Ritzy or Grace at 735-6222.

Protrain offers computer training:

- **Excel 2000 Upgrade** — June 27. Covers the new features of Excel 2000—working with Office Assistant; using new files, worksheets and formulas; formatting features and using Excel HTML files. Prerequisite: previous versions of Excel. Cost: \$99.
- **Word 2000 Upgrade** — June 30. Review new features of Word 2000—use new document features; Word checking tools; enhanced table, graphic and Word HTML features; and macros. Cost: \$99.

June Special!

Enroll in both of the 2000 Upgrade programs for only \$179.

- **Access Beginning** — June 20. Learn the basic database concepts, review the features of Access, work with objects and design table and property fields. Cost: \$89.

- **Access Intermediate** — June 21. Create charts, apply filters, define and apply relationships, and learn to use form features. Cost: \$89.
- **Access Advanced** — June 22. Learn how to use the application development features of the Access database application. Cost: \$99.

June Special!

Register for all three Access classes for only \$249.

- **Project Management Techniques and Project 98** — July 17-19. Define project specification, implementation of a project, learn different elements of managing a project and become familiar with Microsoft Project 98 environment. Cost: \$759 per person, or register 3 or more people for \$699 each.
- **Introduction to Crystal Reports** — July 19. Create reports and formulas. Cost: \$215.
- **Advanced Crystal Reports** — July 20. Compose enhanced reports and learn the full use of the Crystal Reports program. Cost: \$215.

Early enrollment special!

Enroll in both July classes during the month of June for \$398.

- **Word Macros, Merges, & Forms** — June 26. Learn the mail merge process to automate sending a form letter, use macros to automate your work and create your own computerized forms. Cost: \$99.
- **Word Working with Long Documents** — June 29. Create and manipulate long documents. Learn to customize your default settings and toolbars, place data in worksheets and charts, and create tables and figures. Cost: \$99.

June Special!

Complete both June classes for \$179.

- **Outlook 2000 Beginning** — June 23. Learn to work with Outlook basics, office assistant, messaging and features, how to respond to a voting message, and scheduling with calendar. Cost: \$89
- **Access 2000 Beginning** — June 26. Learn to create and modify tables, queries, forms and reports, and use filters. Cost: \$89. ♦

Regular Features



H.anford **E**.mployee **R**.ecreation **O**.rganization

HERO POLICY FOR NON-SUFFICIENT FUNDS

CHECKS — Because of recent incidences with NSF checks received by HERO, our future policy will be to pass associated NSF bank fees on to check issuers. HERO will no longer absorb those costs.

HANFORD RECREATION ASSOCIATION (HRA) DISCOUNTS

— Check out the HRA listing weekly! New vendors are added continually. Located on the Hanford Intranet Web site. To reach the site, click on "Project Hanford Management Contractors," "General Information," "Hanford Information," and then "Hanford Recreation Discounts." A new Web page is under construction... stand by for further instructions!

400/600 AREA HERO REPRESENTATIVE NEEDED

— Interested? Have your manager's approval? Send e-mail to Donna Leech.

THE RICHLAND PLAYERS DISCOUNT TICKETS

— Discounts of \$1 for individual shows and \$4 for season tickets offered to all Hanford Recreation Association (HRA) cardholders. HRA cards must be presented at the box office to receive discounts.

DISCOUNTED CARMIKE MOVIE TICKETS

— \$4.50 each with a limit of six per purchase. Restrictions will apply only to Sony DDS movies. A disclaimer for restricted movies will be noted in the *Tri-City Herald* Carmike announcements. Send checks made payable to "HERO" to Michelle Brown-Palmore (A7-51), Linda Sheehan (T4-40), Nancy Zeuge (X3-56) or Patti Boothe (T6-04).

DISCOUNTED REGAL MOVIE TICKETS

— \$4 each with a limit of six per purchase. Send checks made payable to "HERO" to Michelle Brown-Palmore (A7-51), Linda Sheehan (T4-40), Nancy Zeuge (X3-56) or Patti Boothe (T6-04).

DISCOUNTED MERCY MOVIE TICKETS

— \$5 each with a limit of six per purchase. Tickets honored at all Yakima Mercy theaters with no restrictions. Send checks made payable to "HERO" to Flu Garza (T4-01) or Nancy Zeuge (X3-74).

SILVERWOOD THEME PARK

— Silverwood is now open on weekends only and soon will be in operation full-time. For a complete schedule breakdown, check out related information on the HERO Intranet Web site. Adult tickets are \$17.84 (normally \$25.19), youth (ages 3-7) and senior (age 65+) tickets are \$9.44 (normally \$16.79). Send

checks made payable to "HERO" to Jan Dickinson (H2-23) or Laurie Franklin (R2-12). Personal checks for purchases in excess of \$250 will not be accepted. Send a cashier's check or money order for payments in excess of \$250. No cash, please!

MILLENNIUM TRAVEL/TRIP PACKAGES:

- **Cabo San Lucas** — Oct. 18-25. \$809 ppdo and \$767 ppto. Price includes round-trip air from Seattle, seven nights lodging at Posada Real San Lucas, hotel taxes, round-trip transfers and a guest welcoming party. The hotel is located on the beach in San Jose del Cabo. All rooms are air-conditioned and have an ocean view. Send e-mail to Denise Prior.
- **Mexican Riviera Cruise** — Nov. 19-26. Spend a memorable Thanksgiving aboard Carnival's "Elation" sailing the Mexican Riviera. Rates for this delightful holiday cruise are \$1,025/ppdo for Category 4, inside cabins and \$1,157/ppdo for Category 6, ocean view cabins. Price includes round-trip airfare from Seattle, seven-night cruise, round-trip transfers from airport to pier, all meals and entertainment on board, a "welcome-aboard" cocktail party and much, much more. Port charges are an additional \$139.75 pp. A \$300 pp deposit is required by June 20 to reserve the cabin category of your choice. Special third- and fourth-guest rates are available. Send e-mail to Donna Leech.

More information will appear in the *Reach* and on the Hanford Intranet Web site as details develop and additional trips are offered. ♦

SECURITY Pays in Many Ways

Get INVOLVED!

**Know someone who's
improving site security?**

Nominate him or her through the
"Security Pays In Many Ways" awareness campaign.
More info at [Http://www.R1.Gov/sas/pg1v3.Htm](http://www.R1.Gov/sas/pg1v3.Htm),
or call 376-1820.

Regular Features



VAN POOLS

Vanpool ads are run for two weeks. Ads must be resubmitted to run in subsequent issues of the *Hanford Reach*. The deadline for submissions is Thursday, 10 days prior to publication.

Protection Technology Hanford reminds employees to wear their badges. Vanpool and carpool drivers are responsible for ensuring riders are badged. If a passenger forgets his or her badge, Patrol must be informed at the barricades. For more information, look on the Hanford Web in the Projects and Activities section, Safeguards and Security (PHMC) at <http://www.rl.gov:1050/sas/pg1v3htm>.

KENNEWICK

Opportunity! Seat available for rider seeking a rest from driving your car to work every day. Low monthly rate. Richland Wye to 200W, 8x9 shift only. Call **Fred** at 373-2106. 5/22

RICHLAND

Save your car for summer trips. Drivers and riders are welcome on vanpool from Richland to 200W. Picks up at Wright, McMurray and Bethel Church on Jadwin. Stops at PFP, MO-287, 277-W, MO-279, MO-281 and 272-WA. Call **Bobbie** at 373-2119 or **John** at 372-1041. 5/15

Van No.108 (standard 8x9 shift) leaves Albertson's on Gage, travels through Hills West, picks up at Bookwalter Park 'n Ride on Columbia Drive. Travels to 2750-E and MO-286 and MO-294. Call **Brenda** at 373-9370. 5/22 ♦



B R A V O

Barilo honored as DynCorp employee of the month

On May 10, Nick F. Barilo, Jr. was recognized as the DynCorp Tri-Cities Services employee of the month for March 2000. Barilo was recognized for his exemplary effort in the achievement of two River Corridor Project milestones for delivery of the 324 and 327 Buildings' Fire Hazards Analyses. Without his dedication, technical expertise and commitment, these achievements would not have been possible. Barilo is a dedicated fire protection engineer who continually exceeds expectations. ♦



Barilo



WORKING SOLUTIONS

WSI has packet for travelers

Travel has a unique way of expanding our horizons and letting us step back to appreciate life and our world. Make sure your experiences are positive and enjoyable. Contact Working Solutions before you book your next flight or pack up the car, and ask for your free packet of travel information.

The packet, called "Getting There & Back: Travel for All Ages," includes information on traveling safely, traveling with children and tips for older Americans.

Click www.working-solutions.com and enter your group plan PIN No. 5161.

No Web access? You can also get your free articles by:

- Calling WSI at 800-358-8515. (This number can also be used to talk to a WSI counselor.)
- E-mailing the information requested below to articles@wsi-or.com
- Faxing the form below to 206-362-8081.

YES! Please send me a FREE copy of "Getting There & Back: Travel for All Ages."

Name _____

E-mail _____

Home Address _____ City _____

State _____ Zip _____

Home Phone _____

Work Phone _____

Employer _____

Worksite _____

WSI provides counseling, resources, referrals and educational materials to help Hanford employees and family members through Hanford Family Care Services.